



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/769,220

01/30/2004

Ilya Feygin

153-036US

9574

22897 7590 10/02/2007
DEMONT & BREYER, LLC
100 COMMONS WAY, Ste. 250
HOLMDEL, NJ 07733

EXAMINER

RAMDHANIE, BOBBY

ART UNIT

PAPER NUMBER

1743

MAIL DATE

DELIVERY MODE

10/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/769,220	Applicant(s) FEYGIN, ILYA	
	Examiner Bobby Ramdhanie, Ph.D.	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8, & 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Walt et al (US5814524). Regarding Claim 8, Walt et al teaches a method comprising A). Engaging a chemical entity to a first end of an IR-transmitting fiber (Column 16; lines 22-29 & lines 42-58 & Column 1 lines 56-67); B). Bringing said chemical entity in contact with a binding interaction to a thermal sensor through said IR-transmitting fiber (Column 3 lines 56-66), wherein said binding interaction occurs between said chemical entity and said binding compound (Column 16; lines 22-29 & lines 42-58).

3. For Claim 10, Walt et al teaches the method of Claim 8. Walt et al further teaches the method of Claim 8 wherein engaging a chemical entity further comprises inserting said first end of said IR-transmitting fiber into a sample carrier (Column 5 lines 5-44).

4. For Claim 11, Walt et al teaches the method of Claim 8, wherein bringing said chemical entity in contact with a binding compound further comprises inserting said first end of said IR-transmitting fiber into a well after engaging said chemical entity (Column 5 lines 5-44 & Column 16 lines 22-29 & 42-58).

5. For Claim 12, Walt et al teaches the method of Claim 12 comprising positioning a separator along a plurality of IR-transmitting fibers to obtain a desired spacing between

Art Unit: 1743

said adjacent fibers at one end thereof; and conducting a thermal signal through said IR-transmitting fiber (Column 5 lines 5-44 & Column 3 lines 56-66).

6. For Claim 13, Walt et al teaches the method of Claim 12, further comprising engaging a chemical entity to said one end of said IR-transmitting fibers (Column 1 lines 56-58 & 62-67).

7. For Claim 14 Walt et al teaches the method of Claim 13, further comprising bringing said chemical entity into contact with a binding compound (Column 16; lines 22-29 & lines 42-58).

8. For Claim 15, Walt et al teaches the method of Claim 12, wherein conducting a thermal signal (Column 1 lines 56-58 & Column 3 line 50-56) further comprising conducting said thermal signal to a thermal sensor (Figure 8).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966); that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1, 3-6 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walt et al (US5814524) in view of Narayannan (US5980120). Regarding Claim 1, Walt et al teaches an apparatus comprising: A). A plurality of optical fibers, wherein, said optical fibers each having a first end and a second end (Abstract & Column 5 lines 5-13); B). Said fibers are capable of transmitting infrared radiation ("IR") (Column 1 lines 62-67); and C). A sensor for sensing IR, wherein said sensor is in IR-sensing contact with said first end of each of said optical fibers (Column 1 lines 56-58). Walt et al does not teach D). A separator, wherein said separator engages said plurality of fibers and is suitable for spatially separating said optical fibers in a pattern that enables said optical fibers to engage samples on a sample plate. Narayannan teaches this feature (Column 6 lines 50-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walt et al with Narayannan because according to Narayannan this would allow the fiber array to be held as close as possible to the sensing surface of the sensor to prevent the diffraction of light such that the area of the projected light falls beyond the electrodes (Column 6 lines 41-56).
4. For Claim 3, Walt et al in combination with Narayannan, teaches all of the claim limitations of Claim 1. Walt et al further teaches the apparatus of Claim 1 wherein said second end of said optical fibers are physically adapted to receive a first chemical entity (Column 1 lines 56-67).

5. For Claim 4, Walt et al in combination with Narayannan, teaches all of the claim limitations of Claim 3. Walt et al further teaches the apparatus of Claim 3 wherein said individual samples comprise said first chemical entity (Column 16 lines 22-29).

6. For Claim 5, Walt et al in combination with Narayannan, teaches all of the claim limitations of Claim 1. Walt et al teaches the apparatus of Claim 1 further comprising a surface having a binding compound disposed thereon (Column 16 lines 42-58).

7. For Claim 6, Walt et al in combination with Narayannan teaches all of the claim limitations of Claim 1. Narayannan further teaches the apparatus of Claim 1 wherein said first end of said optical fibers are physically coupled to said sensor (Column 6 lines 50-56).

8. For Claim 9, Walt et al teaches all of the claim limitations of Claim 8. Walt et al does not teach the method of Claim 8 further comprising sliding a separator along said IR-transmitting fiber. Narayannan teaches this feature (Column 2 line 66 to Column 3 line 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walt et al with Narayannan because according to Narayannan this would allow the fiber array to be held as close as possible to the sensing surface of the sensor to prevent the diffraction of light such that the area of the projected light falls beyond the electrodes (Column 6 lines 41-56).

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walt et al, Narayannan and in further view of Seabourne et al (US4972042). Regarding Claim 7, Walt et al in combination with Narayannan, teach all of the claim limitations of Claim 1. Walt et al in combination with Narayannan does not teach the apparatus of Claim 7

Art Unit: 1743

wherein said separator is engaged to said plurality of fibers such that it can slide along said plurality of fibers. Seabourne et al teaches this feature (Figure 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walt et al and Narayannan with Seabourne et al because according to Seabourne et al, this would allow for the arrangement of a large number of cables (Abstract).

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walt et al, Narayannan and in further view of Orban (US3368247). Regarding Claim 2, Walt et al in combination with Narayannan teaches all of the claim limitations of Claim 1. Walt et al in combination with Narayannan do not teach Claim 1 further comprising a collar for bundling said optical fibers. Orban teaches this feature (Figures 1-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Walt et al and Narayannan with Orban because according to Orban, this cable tie can be used for tying together a plurality insulated conductors (Column 1 lines 30-36).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bobby Ramdhanie, Ph.D. whose telephone number is 571-270-3240. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1743

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BR


WALTER D. GRIFFIN
SUPERVISORY PATENT EXAMINER